

侧蚜外茧蜂属的分类研究及二新种记述

(膜翅目:蚜茧蜂科)

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侧蚜外茧蜂属 *Parapraon* 是 Stary' 于 1983 年据前翅中间脉消失,中室外方开放等特征从蚜外茧蜂属 *Praon* 中分出而建立的一个新属,模式种为五倍子侧蚜外茧蜂 *Praon gallicum* Stary', 1971,除模式种外,本属内还包括毁灭侧蚜外茧蜂 *P. necans* Mackauer, 1959、巴基斯坦蚜外茧蜂 *P. pakistanum* Kirkland, 1979、美洲侧蚜外茧蜂 *P. americanum* (Ashmead)三个种;并认为新北区的 *P. simulans* (Provancher, 1886), *P. unicum* Smith, 1944 和日本的缢管侧蚜外茧蜂 *P. rhopalosiphum* Takada, 1968 和优曼侧蚜外茧蜂 *P. yomenae* Takada, 1968 是否应列入本属,需进一步核查。后两种目前国内已有记载。根据我们在河北及山西所采集的标本及以往材料,认为日本(1968)所记述的二种应归入该属。因此到目前为止侧蚜外茧蜂应有 6 种,我国已知 3 种,本文增加两新种,即:短角侧蚜外茧蜂 *Parapraon brachycerum* sp. nov. 及保定侧蚜外茧蜂 *Parapraon baodingense* sp. nov.。毁灭侧蚜外茧蜂 *P. necans* 为国内首次报道。本属 8 种可区分如下。

种的检索(♀♀)

1. 触角节数 18 或 19 节 2
触角节数少于 18 或 19 节 4
2. 触角节数 18 节,第一鞭节长为基宽的 1.4 倍;翅痣长为宽的 4 倍弱,中脉第一段短于第二段 美洲侧蚜外茧蜂 *P. americanum*
触角节数为 19 节,第一鞭节长为基宽的 6~7 倍 3
3. 中胸盾片侧叶有毛,具卵形无毛区;痣后脉长于翅痣(图 1) 保定侧蚜外茧蜂 *Parapraon baodingense* 新种
中胸盾片侧叶无毛;痣后脉短于翅痣 优曼侧蚜外茧蜂 *P. yomenae*
4. 触角节数 15 或 16 节 5
触角节数 13 节(图 2) 短角侧蚜外茧蜂 *Parapraon brachycerum* 新种
5. 触角第一、二鞭节均为黄色 五倍子蚜外茧蜂 *P. gallicum*
触角第一鞭节黄至黄褐色或仅基部黄色,第二鞭节褐色 6
6. 中胸盾片侧叶具毛,仅有卵形无毛区;翅痣比痣后脉短或等长 7
中胸盾片侧叶无毛;翅痣比痣后脉长 缢管侧蚜外茧蜂 *P. rhopalosiphum*
7. 痣后脉与翅痣等长,翅痣长是宽的 5 倍;胸二色 巴基斯坦蚜外茧蜂 *P. pakistanum*
痣后脉比翅痣长,翅痣长是宽的 4 倍;胸单色 毁灭侧蚜外茧蜂 *P. necans* 新记录种

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新 种 描 述

1. 保定侧蚜外茧蜂 *Parapraon baodingense* 新种(图 1)

雌虫：头部背面观近方形，比胸翅基片处宽。复眼小。后颊大于复眼横径，三单眼排列紧凑，呈锐角三角形。脸具稀毛，幕骨指数为 0.4—0.5，唇基近圆形，具毛。触角 19 节，第一鞭节长为基部宽的 6 倍多，是第二鞭节的 1.5 倍，其余各节近等长；触角窝眼距短于触角窝距。

胸部：中胸背板缓和地落入前胸，后纵沟清晰，中胸盾片具毛，侧叶有卵形无毛区。并胸腹节光滑无脊，无毛。前翅翅痣三角形，长为痣宽的 4.5 倍，为痣后脉的 1.5 倍，径脉与痣后脉近等长，中脉第一段基部着色。

腹部矛形，腹柄节长为气门处宽的 1.4 倍，气门瘤呈乳状突起，光滑，在气门后背板隆起。产卵器鞘细长。

体色：整体呈金黄色；复眼、单眼及三角区域，产卵器鞘，足的附节末端，痣及脉褐色。触角的柄节、梗节及第一鞭节黄色，第二鞭节色暗，其余各节暗褐色。

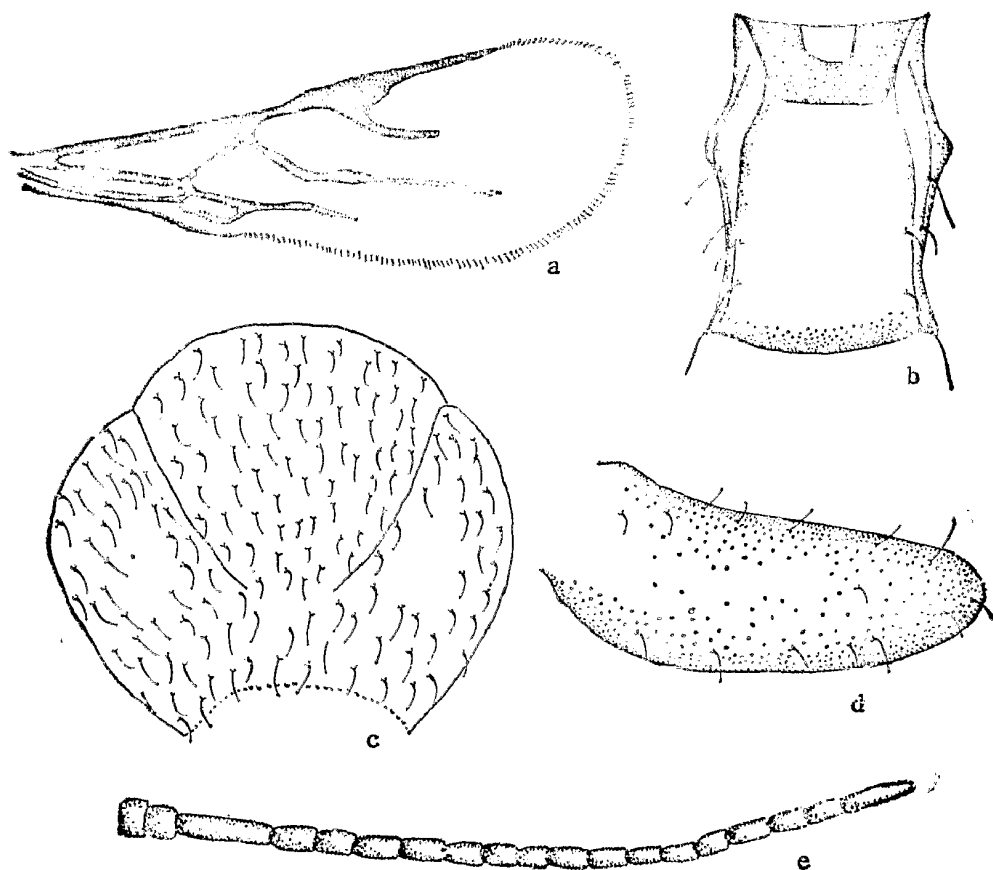
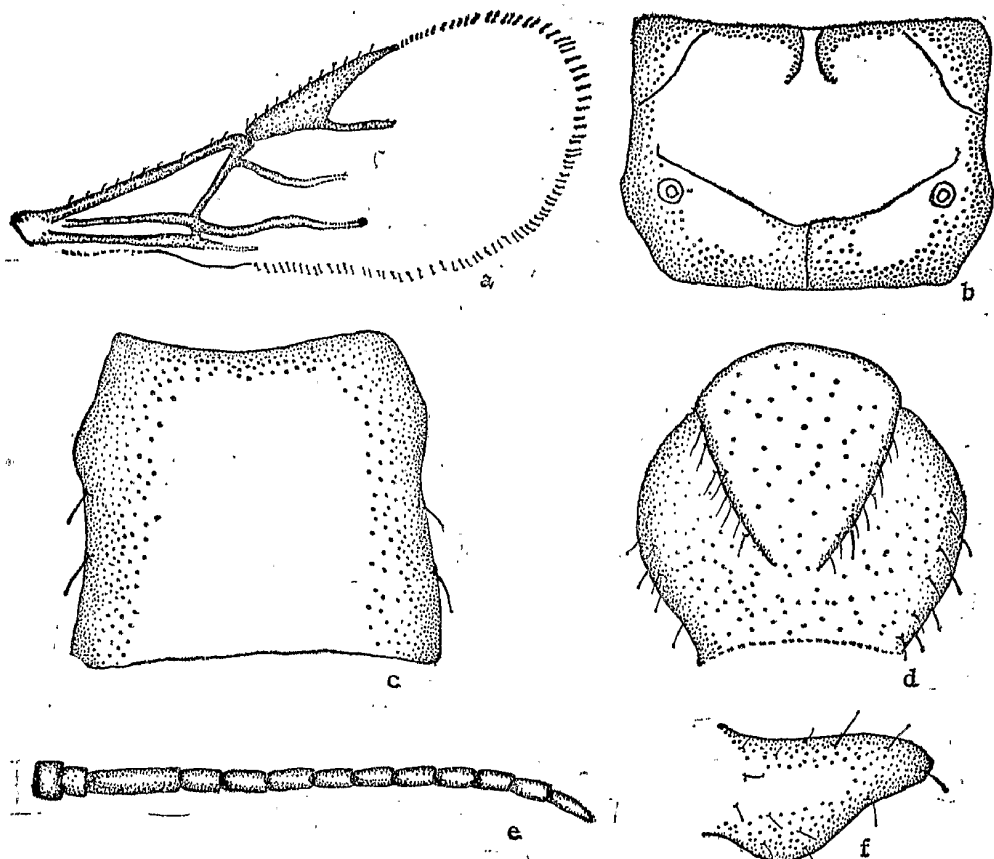


图 1 保定侧蚜外茧蜂 *Parapraon baodingense* sp. nov.

雌虫：a. 前翅；b. 腹柄节背面观；c. 中胸盾片及侧叶；d. 产卵器鞘；e. 触角。



· 图2 短角侧蚜外茧蜂 *Parapraon brachycerum* sp. nov. ♀

a. 前翅; b. 并胸腹节; c. 腹柄节; d. 中胸盾片及侧叶; e. 触角; f. 产卵器鞘。

体长 2.5—2.8mm; 触角长 2.5—2.7mm; 翅长 2.0—2.5mm。

雄虫: 触角 20 节。除外生殖器外同雌虫。

模式标本: 正模 ♀, 黄花蒿 *Artemisia annua* 的一种蚜虫, 1986. V.26、河北, 安国县, 张万玉采。配模 ♂, 其它同正模; 副模: 5 ♀ ♀, 5 ♂ ♂, 其它同正模。存于河北农业大学标本室。

该种触角节数与优曼侧蚜外茧蜂 *P. yomenae* 相近, 但可从本种具较长痣后脉, 中胸盾片侧叶具毛, 胸部桔黄色而区分。

2. 短角侧蚜外茧蜂 *Parapraon brachycerum* 新种(图 2)

雌虫: 头部背面观近方形, 较胸翅基片处宽。复眼中等大小, 卵圆形, 向唇基收敛。后颊与复眼横径近等长, 三单眼排列呈锐角三角形。脸具稀毛, 幕骨指数为 0.3—0.4。唇基圆形, 密毛。触角 13 节, 第一鞭节长为基宽的 4—5 倍, 为第二鞭节 1.3 倍。触角窝眼距等于触角窝距。

胸部: 中胸背板缓和地落入前胸, 中胸盾片光滑, 盾纵沟清晰, 仅沿盾纵沟处及边缘有稀疏毛。并胸腹节无完整小室, 毛稀。前翅翅痣三角形, 长为痣宽 3—4 倍, 为痣后脉

2.4 倍, 径脉长于痣宽, 中脉第一段基部着色。

腹部矛形, 腹柄节长与气门瘤处宽近相等, 方形, 无皱折, 在气门瘤后两侧缘各有 2 根毛, 在气门瘤间背板稍隆起, 气门瘤明显。以后背板光滑, 发亮。产卵器鞘细窄。

体色: 整体茶褐或栗褐色。唇基及口须黄褐色, 柄节、梗节和第一鞭节基部污黄色, 其余褐色。胸部单色, 褐色。跗节色淡。翅透明。腹柄节黄褐色, 第一、二腹节节间缝黄色, 其它褐色。

体长 1.2—1.4mm; 触角长 0.9—1.1mm; 翅长 1.0—1.2mm。

雄虫: 触角 14 节。其它同雌虫。

模式标本: 正模 ♀, 黄花蒿 *Artemisia annua* 上一种蚜虫, 1986. VI.6, 山西, 太谷, 张万玉采。配模 ♂, 其它同正模; 副模: 5 ♀ ♀, 3 ♂ ♂, 其它同正模; 4 ♀ ♀, 2 ♂ ♂, 1985. VI.、河北, 保定, 张万玉采。均存于河北农业大学标本室。

本种可借助于 13 节触角节数, 个体小, 前翅翅脉及中胸背板毛少等特征与本属内其它种区别。

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A STUDY ON *PARAPRAON* STARY, 1983 AND DESCRIPTIONS OF TWO NEW SPECIES (HYMENOPTERA:APHIDIIDAE)

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According to Stary' (1983), 4 species of *Parapraon* are recorded in the World. This paper described two new species of *Parapraon baodingense* sp. nov. and *Parapraon brachycerum* sp. nov.; *P. necans* is recorded for the first time in China. In addition, two new combinations of *Parapraon rhopalosiphum* (Takada, 1968) and *Parapraon yomenae* (Takada, 1968) are transferred from *Praon* Haliday based our materials as well as their original descriptions. A key to 8 species in *Parapraon* of the World is given as follows:

Key to species (♀ ♀)

1. Antennae 18 or 19 segmented.....2
Antennae with a lower number of segments 4
2. Antennae 19 segmented, flagellar segment I about 6—7 times as long as basal width..... 3
Antennae 18 segmented, flagellar segment I about 1.4 times as long as basal width; pterostigma 4 times as long as width, radial abscissa I shorter than abscissa II.....*P. americanum*
3. Metacarp longer than pterostigma; lateral lobes on mesoscutum with hairs, only with small oval hairless areas (fig.1)..... *Parapraon baodingense* sp. nov.
Metacarp shorter than pterostigma; lateral lobes on mesoscutum nearly hairless ...
..... *P. yomenae*
4. Antennae 15 or 16 segmented 5
Antennae 13 segmented (fig.2)..... *Parapraon brachycerum* sp. nov.
5. Flagellar segments I,II entirely yellow; pterostigma longer than metacarp; thorax blackishbrown..... *P. gallicum*
Flagellar segment I yellowish to yellowish brown or only yellow on basal part, segment II brown6
6. Lateral lobes on mesoscutum with hairs, only with oval hairless area; metacarp equal to or shorter than pterostigma7
Lateral lobes on mesoscutum without hairs; metacarp longer than pterostigma ...
..... *P. rhopalosiphum*
7. Pterostigma equal to metacarp, 5 times as long as width.....*P. pakistanicum*
Pterostigma shorter than metacarp, 4 times as long as width..... *P. necans*.

All specimens including the types of new species are kept in the Hebei Agricultural University.

1. *Parapraon baodingense* Ji & Zhang, sp. nov. (fig.1)

This species similar to *P. yomenae* in antennal segments, but it differs in 1): pterostigma 1.5 times as long as width (shorter than metacarp in *yomenae*); 2): lateral lobes on mesoscutum with hairs (nearly hairless); 3): thorax entirely yellow (brown).

Female measurements: Body 2.5—2.7; antennae 2.5—2.7; fore wing 2.0—2.5mm.

Male: antennae 20 segmented, otherwise like female except sexual characters.

Holotype, ♀, on *Artemisia annua*, Anguo County, Hebei Province, May 20, 1986, by Zhang Wan-yu. Allotype, ♂, with same data as the holotype. Paratypes, 5 ♀ ♀, 5 ♂ ♂, with same data as holotype.

2. *Parapraon brachycerum* Zhang, & Ji sp. nov. (fig.2)

This species has 13 segmented antennae, small body, mesoscutum nearly hairless, only a few of hairs along the notaulics and marginal part; pterostigma 3—4 times as long as width, 2.4 times as long as metacarp. so it is easily separated from the congeners.

Female measurements: Body 1.2—1.4; antennae 0.9—1.1; forewing 1.0—1.2mm.

Male: antennae 14 segmented, otherwise like female except sexual characters.

Holotype, ♀, on *Artemisia annua*, Taigu City, Shanxi province, June 6, 1986, by Zhang Wan-yu. Allotype, ♂, with same data as the holotype. Paratypes, 5 ♀ ♀, 3 ♂ ♂, with the same data as the holotype, 4 ♀ ♀, 2 ♂ ♂ Baoding City, Hebei Province, June 10, 1985, on *A. annua*, by Zhang Wan-yu.